

IN THE ABSTRACT

**Please delete the present Abstract in favor of the new Abstract below:**

A process for regenerating a spent hydrogenation catalyst containing at least one catalytic metal selected from Ru, Rh, Pd, Os, Ir and Pt on an inert support, wherein the spent catalyst has been used in a hydrogenation reaction of acetylene present in a gas mixture containing essentially HCl obtained from the pyrolysis of 1,2-dichloroethane, wherein the process essentially is a thermal treatment of the spent hydrogenation catalyst in the presence of oxygen at a temperature of between 300 and 700 °C.